REMARKS

Claims 1-14 were previously presented. Claims 8-14 remain pending in the present application. Claims 1-7 have been cancelled and claims 8 and 10-14 have been amended by the present amendment. Claim 9 is still pending but not amended. Claims 8, 10-14 are independent claims.

Claim Rejections Under 35 U.S.C. § 101

Claims 1-10 are rejected under 35 U.S.C. § 101 because the Examiner considers a "data structure" in claim 1 to be non-functional, descriptive material. In addition to the arguments previously presented on this issue, Applicants respectfully traverse this rejection for at least the reasons presented herein below.

Claims 1-10 stand rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter. In particular, the Examiner asserts that the features of claims 1-10, prior to the amendments shown in the preceding section, did not impart functionality to a computer or computing device and thus, merely amount to ***non-functional*** descriptive material. Claims 1-7 have been cancelled thus rendering the Section 101 rejection moot with respect to these claims. Claims 8 and 10 as amended overcome this rejection as detailed below and clarify that the computer-readable medium of amended claims 8 and 10 is directed toward ***functional*** descriptive material.

The Examiner appears to be under the mistaken impression that only computer programs recorded on a computer readable medium constitute statutory subject matter. This is simply incorrect. MPEP § 2106.01 states the following.

In this context, "functional descriptive material" consists of ***data structures*** and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited music, literary works and a compilation or mere arrangement of data.

Applicants submit that data structures recorded on a computer readable medium may constitute statutory subject matter.

MPEP § 2106.01 further states:

Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, [In re Warmerdam,] 33 F.3d at 1360, 31 USPQ2d at 1759. When functional

descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory).

In view of the above, a more detailed discussion of In re Lowry is warranted.

Claim 1 of In re Lowry recited:

> 1. A memory for storing data for access by an application program being executed on a data processing system, comprising:
>
> ***a data structure stored in said memory, said data structure including information resident in a database used by said application program and including;*** (emphasis added)
>
> a plurality of attribute data objects stored in said memory, each of said attribute data objects containing different information from said database;
>
> a single holder attribute data object for each of said attribute data objects, each of said holder attribute data objects being one of said plurality of attribute data objects, a being-held relationship existing between each attribute data object and its holder attribute data object, and each of said attribute data objects having a being-held relationship with only a single other attribute data object, thereby establishing a hierarchy of said plurality of attribute data objects;
>
> a referent attribute data object for at least one of said attribute data objects, said referent attribute data object being nonhierarchically related to a holder attribute data object for the same at least one of said attribute data objects and also being one of said plurality of attribute data objects, attribute data objects for which there exist only holder attribute data objects being called element data objects, and attribute data objects for which there also exist referent attribute data objects being called relation data objects; and
>
> an apex data object stored in said memory and having no being-held relationship with any of said attribute data objects, however, at least one of said attribute data objects having a being-held relationship with said apex data object.

In finding that the printed matter cases have no factual relevance to the claims at issue in In re Lowry, the court stated:

> Nor are the data structures analogous to printed matter. Lowry's ADOs do not represent merely underlying data in a database. ADOs contain both information used by application programs and information regarding their physical interrelationships within a memory. Lowry's claims dictate how application programs manage information. Thus, Lowry's claims define functional characteristics of the memory.
>
> In re Lowry, at 1034.

The court further noted:

> Indeed, Lowry does not seek to patent the Attributive data model in the abstract. Nor does he seek to patent the content of information resident in a database. ***Rather, Lowry's data structures impose a physical organization on the data***.(emphasis added)
>
> In re Lowry, at 1034.

And, on the issue of abstract ideas, the Federal Circuit in In re Lowry noted:

> More than mere abstraction, the data structures are specific electrical or magnetic structural elements in a memory. According to Lowry, ***the data structures provide tangible benefits: data stored in accordance with the claimed data structures are more easily accessed, stored, and erased***. Lowry further notes that, unlike prior art data structures, Lowry's data structures simultaneously represent complex data accurately and enable powerful nested operations. ***In short, Lowry's data structures are physical entities that provide increased efficiency in computer operation***. (emphasis added)
>
> In re Lowry, at 1035.

The claims at issue (e.g., claims 8-10) are analogous to the claims in In re Lowry, and as such are clearly statutory subject matter. Unlike the claims of In re Warmerdam, the claims of the subject application do not recite mathematical equations, or the generation of data structures using mathematical equations. Instead, as in In re Lowry, claim 8 recites a computer readable medium storing a specific data structure that dictates how application programs reproduce and manage video data. In the language of MPEP § 2106.01 regarding *functional* descriptive material, claims 8-10 are directed to a claimed computer-readable medium storing a data structure defining structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

In light of the above, Applicants respectfully request that the rejection of amended independent claims 8 and 10, and claim 9 depending from claim 8, under 35 U.S.C. § 101 be withdrawn.

Claim Rejections Under 35 U.S.C. §§ 102 and 103

Claims 1-4, 6-8 and 10-14 are rejected under 35 U.S.C. §102(b) as being anticipated by Okada et al. (U.S. Patent No. 6,181,870). Claims 1-7 have been cancelled, thus rendering the claim rejections with respect to claims 1-7 moot. Applicants request reconsideration of these rejections as they may apply to the amended claims.

Claim 8 is directed to a computer-readable medium having a data structure for managing video data recorded on the computer-readable medium having a data area for storing a plurality of data packets including, among other things,

> wherein each of the data packets comprises a transport stream packet having 188 bytes or a source packet having a header and the transport stream packet, and
> wherein the said fixed packet interval corresponds to at least two transport stream packets or source packets.

Similar language appears in claims 11, 12, 13 and 14.

It is respectfully submitted that Okada does not expressly nor inherently teach this aspect of Applicants' invention as recited in claims 8, 11, 12, 13 and 14. A careful examination of Figures 6A-6H of Okada shows that the various packets constituting the data stream do not have a similar structure to that now recited in claims 8, 11, 12, 13 and 14, as amended.

Thus, Applicants respectfully request reconsideration and withdrawal of the current rejections under 35 U.S.C. § 102(b) as being anticipated by Okada et al. as they may apply to the now amended claims.

Claim 10 is directed to a computer-readable medium having, *inter alia*, a plurality of time control information areas, representing decoding time interval information "wherein each of said plurality of time control information areas is recorded in an arbitrary one packet having one of said program reference timing control areas." Applicants submit that this aspect of claim 10 is not taught either expressly or inherently in the cited reference, and in particular, is not shown or suggested in a careful examination of Figures 6A–6H and the supporting section of the specification.

Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Okada et al. (U.S. Patent No. 6,181,870) as applied to claims 1-4, 6-8 and 10-12 above, and further in view of Yoo et al. (U.S. Patent Publication No. 2002/0150392).

As to the rejection of claim 9, Applicants submit that they have properly demonstrated that the recited attributes of independent claim 8 are neither shown nor suggested in the primary reference. Furthermore, Yoo is incapable of curing the deficiencies in the primary reference. Thus, it would not have been obvious to one of ordinary skill in the art at the time the invention was made to use 10 packets as a fixed interval in the system disclosed by Okada et al. to simply perform the data process step and reduce the time for data processing.

By demonstrating the differences between claim 8 and the primary reference, it is respectfully submitted that claim 9, as dependent on claim 8, would also be allowable over the art of record either under Section 102 or Section 103. Reconsideration of this rejection is also respectfully requested.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 8-14 in connection with the present application is earnestly solicited.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants hereby petition for a three (3) month extension of time for filing a reply to the outstanding Office Action and submit the required $1,050.00 extension fee herewith.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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